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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/513,040	02/25/2000	Jianzhong Jiao	98,766	7630

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EXAMINER

CHOI, JACOB Y

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 04/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/513,040

Applicant(s)

JIAO ET AL.

Examiner

Jacob Y Choi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10, 11, 14, 15 and 17-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10, 11, 14, 15 and 17-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Objections

1. Claim 21 & 23 are objected to because of the following informalities: define term "I" within the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 23 & 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "automotive signal lighting requirements or Federal Motor Vehicle Safety Standards" in claims 22 & 24 are a relative term which renders the claim indefinite. The term "automotive signal lighting requirements or Federal Motor Vehicle Safety Standards" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is unclear that what is the automotive signal lighting requirements are and Federal Motor Vehicle Safety Standards changes frequently.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-8,10,14,15 and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishikawa (USPN 5,584,572).

Regarding claim 1, Ishikawa discloses a reflector portion extending from a first surface end of a second surface end, the reflector portion positioned on either side of an elongated tubular light source (cylindrical Xenon tube), the reflector portion reflecting light emanating from the elongated tubular light source towards an aperture (18a) of the tubular reflector, and a semicircular reflector (18) having a smooth reflective surface, the semi-circular reflector coupled to the first surface end of the reflector portion so that light emanating from the elongated tubular light source is reflected off of the semi-circular reflector and re-directed from the light source towards the aperture of the tubular reflector (Figure 1-9).

Regarding claim 2, Ishikawa discloses the reflector portion is a semi-elliptical reflector.

Regarding claim 3, Ishikawa discloses a lens means coupled to the semi-circular reflector, the lens means processing the reflected light (26).

Regarding claim 4, Ishikawa discloses a reflective surface disposed on the smooth semi-circular surface.

Regarding claim 5, Ishikawa discloses a reflective surface disposed on the semi-circular reflector.

Regarding claim 6, Ishikawa discloses the reflective finish disposed on the semi-circular reflector is essentially the same as a reflective finish disposed on the semi-circular surface (Figures 1-9).

Regarding claim 7, Ishikawa disclose a semi-circular reflector having an elongated tubular light source mounted in the semi-circular reflector, the semi-circular reflector reflecting light emanating from the elongated tubular light source, and a multi-faceted reflector (22, 22a, 24, 24a) coupled to the semi-circular reflector (20, 20a), the multi-faceted reflector having an least two facets positioned at angles to one another so that light emanating from the elongated tubular light source is reflected away from the light source (Figures 1-9).

Regarding claim 8, Ishikawa discloses a lens means (26) coupled to the multi-faceted reflector, the lens means received and processes the reflected light.

Regarding claim 9, Ishikawa discloses the securing mean for securing the reflector to the lens means (Figure 7-9).

Regarding claim 10, Ishikawa discloses the securing means is provided to the reflector (Figure 7).

Regarding claim 14, Ishikawa discloses a housing portion (12) having an interior reflecting surface, a first reflective finish disposed on the interior reflecting surface, a reflector portion coupled to the interior reflecting surface, an elongated tubular light source mounted in the semi-circular reflector portion, the semicircular reflector portion

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formed around the elongated tubular light source, a second reflective finish disposed on the semi-circular reflector portions, and a lens portion (26) coupled to the housing portion, such that the reflective finish reflects light from the elongated tubular light source towards the lens portion.

Regarding claim 15, Ishikawa discloses the interior reflecting surface comprises a plurality of facets (22, 22a, 24, 24a).

Regarding claim 17, Ishikawa discloses the plurality of facets are arranged in a stepwise orientation (Figures 1-9).

Regarding claim 18, Ishikawa discloses each facet of the plurality of facets has a similar reflective finish.

Regarding claim 19, Ishikawa discloses the reflector is semi-circular (near the light source).

Regarding claim 20, Ishikawa disclose the reflector is semi-elliptical (front portions of the light source).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nederpel et al. (USPN 5,735,595) in view of Ishikawa (USPN 5,584,572).

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Regarding claim 11, Nederpel et al. discloses the tubular reflector (12) is a vehicle stop lamp. Ishikawa teaches that it is known to modify the reflector as a semi-circular reflector with an elongated tubular light source mounted in the semi-circular reflector, the semi-circular reflector reflecting light emanating from the elongated tubular light source, and a multi-faceted reflector coupled to the semi-circular reflector, the multi-faceted reflector having at least two facets positioned at angles to one another so that light emanating from the elongated tubular light source is reflected away from the light source. It would have been obvious in the one skilled in the art at the time the invention was made to combine certain reflector structure to a vehicle stop lamp, since Nederpel et al. teaches that it is known in art to have a reflector and it is necessary structure in vehicle lamp device.

8. Claims 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa (USPN 5,584,572).

Regarding claims 21 & 23, Ishikawa discloses the claimed invention except for the specified equation. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the shapes of the reflector to optimize the shape of the reflector to improve the light distribution from the light source, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claim 22, Ishikawa discloses the claimed invention, explained above. In addition, Ishikawa discloses each facet location and angle are chosen to create the

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light distribution pattern that complies with signal lighting requirements by setting desired outer and inner light distribution angles.

Regarding claim 24, Ishikawa discloses the claimed invention, explained above. In addition, Ishikawa discloses the light distribution pattern that complies with signal lighting requirements.

Response to Amendment

9. Examiner acknowledges that the applicant has amended claims 1-7, 10, 11, 14 & 20 and newly added claims 21-24.

Response to Arguments

10. Applicant's arguments filed 08/30/2002 have been fully considered but they are not persuasive.

In response to applicant's argument that claims now recite an automotive tubular reflector within the body of the claims, Examiner disagrees. Claims now include limitation of "an automotive faceted elongated reflector" through out the claims, the contents of the term "an automotive" is still an intended use of the claimed invention. Therefore, the recitation of an automotive faceted elongated reflector has not been given patentable weight. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ 2d 1647 (1987).

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In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, reflector of Ishikawa and reflector of Nederpel obvious to combine because one of ordinary skill in the art would be motivated to use certain shapes of the reflector to improve the light distribution from its source.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tenmyo (USPN 6,467,931) – illumination device having optical member providing total reflection of part of an incident light beam

McLoughlin et al. (USPN 6,461,023) – focused floodlight having multi-sectional reflector surface for uniform illumination

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob Y Choi whose telephone number is (703) 308-4792. The examiner can normally be reached on Monday-Friday (10:00-7:00).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (703) 305-4939. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-7724.

JC
April 2, 2003



Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800